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Report of the Friends of the Chair of the Statistical Commission on an assessment of the statistical indicators derived from United Nations summit meetings

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its thirty-second session,** the Secretary-General has the honour to transmit to the Commission the report of the Friends of the Chair of the Commission on an assessment of the statistical indicators derived from United Nations summit meetings. The report is contained in the annex to the present note. The Commission may wish to endorse the technical findings contained in the report and recommend that the report be transmitted to the Economic and Social Council.

* E/CN.3/2002/1.

** See *Official Records of the Economic and Social Council, 2001, Supplement No. 4* (E/2001/24), chap. I, sect. A.

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Report of the Friends of the Chair of the Statistical Commission on an assessment of the statistical indicators derived from United Nations summit meetings

Executive summary

The present report results from a request from the Economic and Social Council to the Statistical Commission. It arose out of a concern about the large number of seemingly uncoordinated demands for statistical indicators to monitor a wide range of policy issues that had been agreed at various United Nations summits and major conferences. In its resolution 2000/27, the Economic and Social Council requested the Commission, as its authoritative technical advisory body, to:

- Provide leadership in the field of conference indicators;
- Conduct an in-depth technical analysis of conference indicators;
- Make recommendations regarding a limited list of conference indicators;
- Develop and recommend to the Council a mechanism of statistical review for future proposed indicators.

The technical assessment was carried out on more than 280 statistical indicators derived from United Nations summits and major conferences held over the last 10 years. Seven expert groups were established to cover the common division of policy (economics, health, education etc.) that is reflected in ministerial responsibility in most countries. The expert groups had members drawn from many countries. The indicators were assessed on technical criteria and the relevance to the policy goals. A web site has been created that contains all of the indicators and the technical assessment of each.

In response to the request for a limited list of conference indicators, we propose an indicator framework containing three priority tiers. Each tier contains about 50 statistical indicators. In addition, a further category contains indicators that would be useful for a more detailed understanding of any policy area. The framework is arranged to reflect the major policy areas referred to above. However, important additional policy areas cut across this arrangement and typically cut across government department policy responsibilities in many countries. Such policy areas include poverty, gender and child welfare. Indicators covering those issues are contained within the framework.

Also, there are areas in which the indicators need improvement or indeed simply do not exist and need to be developed (e.g., indicators for human rights and good governance). Those tasks were too extensive to undertake in the time available. However, we make recommendations to the Commission to establish processes to accomplish those tasks.

A correspondence between the proposed framework and the existing high-level indicator sets is provided.

The development of statistical indicators and the statistical capacity that allows higher standards to be met are dynamic. Initiatives exist within international agencies that will require the proposed framework to be reviewed if it is to remain relevant to changing needs. Hence, the framework must be kept under review, and we make

recommendations to achieve that and to improve coordination between international agencies.

Finally, we turn to the question of future summits and major conferences and the need to propose mechanisms that will allow further development of the framework in response to emerging needs. The existing arrangements for indicator development are clearly unsatisfactory. We recommend procedures to improve that situation.

Those recommendations are based on the recognition that the stakeholders in the indicator programme span policy officials and statisticians in both international organizations and Member States. Mechanisms are needed to ensure that all can play a full part in indicator development and priority setting. The process of turning a policy goal into a statistical indicator that is feasible to measure and technically sound should involve all stakeholders.

Another important issue is the level of statistical capacity needed for countries to support the information needs of national and global policies. Developing statistical capacity goes beyond providing financial and technical support from international donors that is narrowly focused on specific statistical production to monitor a specific global policy. It calls for more support for systemic development.

A further issue is the reconciliation of information needs for national and global purposes. In the long run, financial support for statistical programmes must depend upon national rather than international provision, which in turn depends upon national Governments using and valuing statistical information in support of policy development, policy monitoring and good public administration in general. Hence, it is essential that the national statistical system support national policy goals.

The report contains a series of recommendations that are intended to address those issues. In particular, mechanisms are proposed to ensure greater participation for Member States in the development and adoption of statistical indicators for global and national purposes.

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Demography:	David Pearce (United Kingdom)
Health:	Jennifer Madans (United States of America)
Environment and energy:	Hilary Hilier (United Kingdom)/ Bob Harrison (Australia)
Economy and poverty:	Rob Edwards (Australia)
Employment and labour:	Ian Macredie (Canada)
Education:	Scott Murray (Canada)
Other social:	Linda Sabbadini (Italy)

Finally, a significant burden fell onto the staff of the United Nations Statistics Division and we sincerely thank them for their support.

I. Introduction

1. In the last decade, United Nations summits and major conferences (averaging almost two per year) have covered a wide range of economic and social issues. Those conferences have resulted in declarations related to future goals and targets that have been endorsed by member States and are intended to improve the well-being of the world's population. Goals and targets call for a commitment to monitor progress towards them, and as a result indicators (usually statistical indicators) have been identified in relation to each goal. The intention is to monitor and report on them so that progress towards the declared goals and targets can be measured.

2. However, there is concern that that process has gone forward with too little coordination between officials concerned with the separate conferences in terms of the number and choice of indicators to be monitored. The conferences have varied considerably in terms of the number of resulting indicators (ranging from a handful or less to as many as 70 being identified from a single conference). In total, more than 280 indicators have been identified.

3. The perception is that that uncoordinated process has resulted in a plethora of indicators of different levels of importance in policy terms. Also, there is potential for confusion among users because of an apparent inconsistency and lack of coherence among the indicators. The ongoing addition of indicators has also resulted in a large demand for statistical information from each member State: a demand that has to be set alongside the demands for statistical information for national policy purposes. For countries with less well developed statistical infrastructure, that total demand can be disproportionate to the resources available to meet it.

4. Attempts have been made to distil core sets of indicators that might be afforded greater recognition and therefore higher priority. The Statistical Commission identified the Minimum National Social Data Set (MNSDS) (15 indicators). The Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD), in cooperation with the United Nations, the World Bank and the International Monetary Fund (IMF), identified the international development goals (IDGs) (21 indicators); that set drew heavily on international summits up to 1995. The United Nations Development Group identified indicators to support the common country assessment, again based on an analysis of the requirements of United Nations summits (United Nations Development Assistance Framework (UNDAF)-common country assessment, 57 indicators). Similarly, the need to promote and assess sustainable development resulted in an additional set from the Commission on Sustainable Development (57 indicators). There are also the basic social services for all indicators (12 indicators). And the Friends of the Chair has been aware of work within the European Union on 35 structural indicators.

5. And the process goes on. While the present report was in preparation, the choice of statistical indicators to support the "millennium development goals" was announced (see A/56/326, annex: 48 indicators), constituting another high-level set of indicators that will be monitored.

6. The Economic and Social Council considered this question in 1999 and 2000, and there is a general recognition that better coordination is needed and that full participation and ownership by Member States was needed in all stages of indicator development. In its resolution 2000/27, the Council requested the Statistical Commission, as its authoritative technical advisory body, to:

- Provide leadership in the field of conference indicators;
- Conduct an in-depth technical analysis of conference indicators;
- Make recommendations regarding a limited list of conference indicators;
- Develop and recommend to the Council a mechanism of statistical review for future proposed indicators.

7. As a result, at its thirty-second session the Commission established a group of "Friends of the Chair" to consider the issues further and report thereon to the Commission at its thirty-third session, so that the Commission could in turn report to the Council at its substantive session of 2002.

8. The members of the group were:

Tim Holt (United Kingdom) (Chair)

Guest Charumbira (Botswana)

Claudia Cingolani (Italy)

Francisco Guillen (Mexico)

Hasan Abu Libdeh (Palestine)

Jil Matheson (United Kingdom)

Yue Renfeng (China)

Hussain Shakhatreh (Jordan)

Bounthavy Sisouphantong (Lao People's Democratic Republic)

Ken Tallis (Australia).

9. In order to carry out the required in-depth technical review, the group subdivided the 280 identified indicators into the following seven domains:

- Demography;
- Health and nutrition;
- Environment and energy;
- Economics and poverty;
- Employment and labour;
- Education;
- Other social indicators.

Seven indicators related to human rights and good governance were excluded from the framework because they were all qualitative in nature and no statistical indicators had been identified. We will return to that point in due course.

10. The domains represent major divisions of policy responsibility that are commonly reflected by separate ministries in many countries (economics, health, education etc.). In addition, there will be important cross-cutting policy areas, such as poverty, child welfare or gender, that are distributed across those domains.

11. We considered the requirement to make recommendations about a limited number of indicators, and following the discussion by the Commission at its thirty-second session, established a hierarchy of indicators containing three priority tiers and a category of "additional" indicators. The first tier contains statistical indicators that might be regarded as of the highest priority and are essential for broad monitoring; it includes a small number of indicators in each domain. The second and third tiers contain additional indicators that progressively add to the overall picture and include indicators that allude to additional policy priorities. A fuller description is given in section III below.

12. We are very aware of the need for countries to reconcile their statistical needs for national policy purposes with international requirements. The hierarchical structure offered is not meant to be mandatory or to impose a straightjacket on member States, although we think that all countries should be encouraged to compile all indicators within the first tier unless there are overwhelming national reasons not to do so. In our view, the second tier and many of the indicators in the third tier would be valuable in most countries. However, it is likely that countries with particular concerns or policy initiatives will wish to collect extensive statistics for some domains (including those in the additional indicator category) and less for others. Also, the statistical requirements for national policy purposes — in effect most of the output of the national statistical system — will probably go beyond the indicators identified in the framework. Nonetheless, the framework is intended to enable countries to assess their statistical priorities and to reconcile the statistics that are needed for national purposes in keeping with global requirements. As such, we hope that countries will find the framework useful.

13. For each domain, an expert group was established drawn from member States across the world. Some members of each expert group were official statisticians and others were more concerned with policy issues.

14. In addition, useful discussions were held with representatives of the United Nations Statistics Division, the United Nations Population Fund (UNFPA), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), OECD and the World Bank, and we attended the thirty-fifth session of the ACC Subcommittee on Statistical Activities held in Vienna from 18 to 20 September 2001, at which an initial draft of our report was discussed.

15. As a further consultation phase, a draft version of the report was circulated to all national statistical offices, regional commissions and international agencies. It was also placed on the United Nations Statistics Division web site. The final version of the report takes into account the responses received to that consultation. Representatives of a number of international agencies also attended the meeting of the Friends of the Chair at which the draft report was effectively finalized. We acknowledge and thank all contributors, but the final responsibility for the present report rests with the Friends of the Chair.

II. Key issues

16. The request from the Economic and Social Council to the Statistical Commission and the terms of reference established for the Friends of the Chair reflect concern over the current process for identifying indicators. That concern includes the lack of coordination between stakeholders, insufficient involvement by Member States in the process and the lack of structure of the resulting indicator sets. A number of key issues need to be recognized and taken into account.

A. Stakeholders

17. Identifying statistical indicators for monitoring purposes is neither a pure policy nor a pure statistical issue. The basic expression of the policy goal must drive the monitoring requirement, but turning that expression into a statistical indicator that will be relevant, reliable and acceptable to the various stakeholders is a statistical function. The tension between the policy view of what is needed and the statistical view of what is feasible and technically sound should be resolved by joint determination.

18. A second stakeholder issue is that although the statistical indicators that are derived from United Nations conferences and summits are motivated by international needs, they are based on policy issues that must be reflected in the national policy agenda if the desired progress is to be achieved. However, there can be differences between national and international priorities, and the need to reconcile national and international priorities needs to be addressed.

19. A third stakeholder issue rests on the simple fact that most of the statistical indicators are derived from national statistical programmes, which are predominantly funded from national resources and reflect a range of user needs of which the international need is only one. National statisticians must try to respond to often disparate user needs within the resources available. Their ability to respond will depend heavily on the general level of statistical capacity in the country and the extent to which additional demands create a response burden on countries or whether existing statistical sources can be used or adapted to meet additional needs. Thus, national statisticians are stakeholders. Their expertise is different from statisticians working within international agencies and they have an important contribution to make to the process of developing statistical indicators.

B. National and international priorities

20. Relevance is a dominating requirement of statistical information. If statistics are not relevant to the policy need, they will not command the attention, or have the impact that they should. In particular, failure to meet national needs will undermine the requirement to develop sustainable statistical capacity since in the long term that must depend on national governmental funding and support. It will also undermine evidence-based policy as a basis for good governance and public administration within countries. From the United Nations perspective, that would as a result undermine the provision of statistical indicators for international monitoring purposes.

21. To some extent, the tension between national and international needs may be reduced if the statistical system is rich enough and flexible enough to support diverse needs. For example, a well designed household budget survey can estimate the proportion of the population below an international poverty standard and against a national poverty standard. In such cases, the conflict between national and international requirements is avoidable. In other cases, the resolution may call for additional resources — to collect a wider range of data or to fund larger sample sizes so as to meet competing needs. In our view, all efforts should be made to reconcile national and international needs so as to support both, which implies that countries should recognize the need to support international

needs and that international agencies should accept the need to support statistical activities focused on national as well as international needs. Investment in modular frameworks or analytical capacity that allows countries to exploit core sets of survey data for a variety of purposes would be valuable.

22. Thus, any rationalized set of indicators should be applicable (or readily adaptable) to both national and international priorities. In the time available, we have not been able to assess the question as comprehensively as we would have wished, although we have drawn upon the experience of the members of the expert groups and international agencies. In our view, that assessment should be done more systematically before the proposed framework of indicators and their priority levels are "set in stone". The recommendations that we make for the Commission to maintain the indicator framework will permit this.

C. Statistical capacity

23. The ability to produce consistent, reliable statistical information on an ongoing basis requires a sustained statistical capacity. That requirement is not a one-off capability but implies the ability to produce statistics on a regular basis and with the timeliness needed.

24. In particular, a sound statistical infrastructure is essential, by which we mean:

- Underpinning systems to create and maintain sampling frames for business and household surveys;
- A critical mass of ongoing statistical activities: survey design, data collection and analysis in order to nurture the basic professional skills;
- The technical and professional capacity to maintain and develop systems in accordance with international standards as they are developed over time;
- A developed analytic capacity;
- Adequate statistical frameworks and information technology (IT) infrastructure;
- Good management to make the most use of the resources that are available;
- All of the above embedded within a wider legal and administrative structure that recognizes the importance of good statistical information and the need to sustain the conditions in which it can be produced with high professionalism and integrity, consistent with the United Nations Fundamental Principles of Official Statistics.

25. Without that core capacity and the ongoing resources to support it, neither the statistical needs of the country nor those of the international community will be reliably served. In many countries, adequate ongoing financial support is a key issue. Where that core capacity is fragile, the sporadic provision of additional funds to satisfy a particular statistical need will be much less effective and cannot substitute for what one might term "statistical sustainability".

26. Statistical indicators need to be viewed as the end product of often complex statistical infrastructures that are essential if the indicators are to be produced with adequate quality. Population estimates, for example, which are fundamental to many indicators that are expressed as rates or per capita estimates, depend on periodic censuses to provide benchmarks and on systems of vital registration or other sources to permit inter-censal population estimates. Many social statistics depend upon social surveys that need sustained expertise if they are to be well conducted. Complex measures, such as gross domestic product (GDP), require an extensive framework of business surveys, administrative sources and underpinning infrastructure if the statistics are to be of adequate quality. Too much emphasis has been placed on the indicators (the end product) and too little on the statistical sources and infrastructure that underpin them. The majority of aid agencies and donors are perceived to provide aid to conduct studies needed to fulfil their objectives without considering national capacity-building.

27. Countries and international donors need to recognize that each statistical initiative depends on the core statistical capacity within the country, and that internationally sponsored activities must contribute to that sustainable capacity. It is essential that those activities support both national and international statistical needs rather than being perceived as being driven by international goals alone. The effective use of statistical information within national Governments needs to be promoted and the Council and international donors have an important role to play if the statistical

system is to command consistent financial and political support from the national Government of the day.

28. It is important to note that donor resources are often tied to specific international objectives while being characterized as supporting statistical capacity-building. While such resources may provide financial support, there is a frequently expressed concern that such programmes may consume the statistical expertise available within the country and thus distort the overall priorities. If that is so, it represents not statistical capacity-building but statistical capacity diversion. It is important that donor-supported programmes genuinely add to the sustainable resources within the country.

29. We believe that an indicator of statistical capacity should be developed and monitored. That measure could be based on the level of regular statistical activity within a country, an ongoing critical mass of survey-taking and statistical analysis, and the existence of basic elements of statistical infrastructure. A task team within the Partnership in Statistics for Development in the Twenty-first Century (PARIS 21) initiative has that work in hand, building on the IMF Data Quality Assessment Framework. One concern is that that initiative and the resulting indicator should not be dominated by economic statistics but should span the wide range of statistical areas covered by national statistical systems and the indicators considered in the present report. Also, the membership of the task force has no country representation. **We recommend that those concerns be remedied and that the eventual proposals be made to the Commission.**

30. Building and monitoring statistical capacity is a systemic issue. In our recommendations, we have taken account of that fact in several ways. First, we have focused on indicators (especially in the first two tiers of the framework) that should be feasible for most countries to compile (perhaps initially with statistical assistance but as part of the ongoing statistical programme in due course). Second, we propose a systematic assessment of the availability and frequency of indicators in the priority categories. Third, we have in some cases defined a sequence of successive approximations to ideal indicators that countries might compile as their statistical capacities develop. We recommend that approach for the maintenance and development of the framework.

D. Response burden on countries

31. A frequently heard concern is that the uncoordinated demand for a wide range of statistical indicators places a burden on national statistical offices that cannot be responded to, or that such a burden is incompatible with the national statistical needs and diverts scarce resources (skills as well as finance) from other priorities. National statistical offices generally wish to respond to all expressed needs as long as they are technically well founded, but the concern is that they cannot be met within the resources (both financial and skills) available.

32. International agencies have taken steps in recent years to align their statistical requirements and improve coordination when requesting statistics from countries, particularly by establishing joint data-collection mechanisms. That process should continue with a view to further streamlining the demand on countries.

33. There are two solutions to the general problem of burgeoning demand: to reduce demand or to increase the resources and hence statistical capacity. The latter would serve user needs better and is preferred, but in the short term both are needed.

34. In terms of managing demand, the following are helpful steps:

- Reconciling international and national statistical requirements, which will reduce the burden;
- Establishing a hierarchical structure of statistical indicators so that countries may determine their priorities more systematically;
- Producing more guidance on best practice and measurement processes;
- Further coordination between international agencies on data needs and joint data-collection from Member States.

35. In terms of increasing resources and capacity:

- Increasing the funding available for the less well developed statistical offices is essential and will be needed on an ongoing basis. In the long term that must come from within the country, but in the short term it often comes about as a partnership between national Governments and international donors;

- A climate of support for the statistical system within the country will be developed only if national Governments see statistical information as essential in support of national policies and good governance. In seeking efficient and effective public administration, Governments need to view statistics as part of the solution rather than simply as an additional claim on public expenditure;

- Developing a core statistical infrastructure and a critical mass of professional and technical skills is essential;

- In the case of the donors, they must ensure that all statistical activities strengthen the sustainable statistical capacity and, by taking account of national needs, strengthen the value that national Governments place on statistics.

36. The resource implications for new statistical outputs may be very different in different countries and depend on the existing level of statistical capacity. From the lowest additional cost to the highest, one may set out a hierarchy of resource implications:

- In some cases, it is simply a question of analysing existing data in a different way in order to provide the required output. An analysis by sex is such an example, as long as the basic information on the subject's sex is available for each data record. In such cases, the resource requirement (assuming professional skills are available) is small;

- An approach more demanding of professional skills is the use of modelling, synthetic estimation and other analytical techniques applied to exploit existing data sources for new purposes. The financial cost may be low but the technical knowledge to produce high-quality outputs is significant;

- In other cases, the new requirement may call for a small number of additional items to be collected and analysed using an existing survey. The resource implications are a little higher but as long as the core statistical capacity is in place it is generally feasible to support such a requirement;

- More seriously, the new requirement may call for a substantial increase in the sample sizes employed. Regional and other subnational estimates that are often required for national purposes are a good example, estimates of population subgroups are another. Both can add significantly to the existing costs and the need for analytic skills;

- Even more seriously, the new requirement may call for an entirely new data-collection system, for example, a new household survey or a new business survey. That is generally an order of magnitude more demanding in terms of time for development, in terms of costs, including interviewer and data processing costs, and also in terms of diverting often scarce professional and technical skills from existing programmes to the new survey. In order to avoid that issue, there are examples of existing surveys becoming overburdened with competing and potentially conflicting data requirements to the extent that one must question whether they are manageable. Also, the burden on the respondents who participate in the survey is very severe;

- Where the primary data source is an administrative system, new needs may call for the system (or the underpinning software) to be redeveloped, which can be a major undertaking unless the administrative system is being redeveloped for other purposes, although for some statistical uses it may be the best long-term strategy for a statistical office;

- Finally, some new requirements may call for an infrastructure that simply does not exist in a particular country. For example, some administrative systems (e.g., vital registration) may be non-existent or in such poor state that their use for statistical purposes is impractical. Or measurement processes (for example, as are often used for some environmental indicators) may not exist. In such cases, the basic infrastructure must be established, which can be a long and expensive process.

37. In general, the better the core statistical infrastructure, the better a country can respond to new statistical requirements. If national and international goals are to be met a strengthening of the core will be required in many countries.

38. In particular, the statistical infrastructure to support estimates of GDP and vital statistics is particularly demanding and complex. Ideally, it requires both survey capability and access to effective administrative systems as data sources. Both are cornerstones of the whole indicator programme since many indicators make use of them.

39. **Hence we make the following interrelated recommendations:**

- **The identification of statistical indicators for monitoring purposes should involve both policy officials and statisticians, and each of those groups should draw upon international agencies and member States. We elaborate this recommendation in section IV below;**
- **The Economic and Social Council and international donors should recognize the need to support and develop core statistical capacity within member States, including statistical infrastructure, and all donor activity for statistics should recognize the need to address both national and international statistical requirements;**
- **Donor-supported programmes should genuinely add to the statistical capacity within the country rather than divert it;**
- **As part of that recognition, the Council and international organizations and donors should promote the use of statistics to support effective national policy development and good public administration;**
- **The initiative to develop an indicator of national statistical capacity through the PARIS 21 initiative should span social and economic statistics and be modified to involve member States, and final proposals should be made to the Commission;**
- **The United Nations Statistics Division should promote the development of standards and guidance on best practice for indicators, where needed;**
- **The international agencies should strive to improve the coordination of data collection from countries.**

E. Quality and technical properties

40. It is important that the chosen statistical indicators are relevant to their purpose and satisfy technical criteria. Measurement for statistical purposes is an exacting discipline, calling for specialist development. Definitions and concepts need to be as precise as possible, consistent with their intended use. The resulting statistics need to satisfy statistical quality criteria and conform to international standards, where established. The development of high-quality statistical indicators takes time, and may well require field tests and evaluation before suitable indicators can be developed.

41. Over the years, largely independent of the need to monitor conference goals, countries have developed suites of core statistics, such as population estimates, GDP or life expectancy, which have been developed through extensive processes over time; international guidelines exist to support best practice and the statistical properties are relatively well understood. As long as such indicators are relevant to conference goals, they are readily available for monitoring purposes. Nevertheless, even for such indicators, actual quality varies between one country and another, depending on the strength of the statistical infrastructure in each country and the basic statistical capacity.

42. But for new policy areas, such as human rights and good governance, no established statistical indicators exist. Their development will take time and the process needs to involve statisticians and policy officials.

43. An additional difficulty for some newly developed indicators is that targets related to future improvements from a baseline date may be agreed (for example, reducing by a third the incidence of a particular event within a period of 10 years). If the statistical indicator that is used to monitor that target is not widely available at the baseline time, then there is no base value from which to measure progress. There is no easy solution to that problem, but when such targets are adopted there is a need for the conference to recognize the need to support the development of

baseline measures. If not, it risks bringing discredit to the whole process of target-setting. **We recommend that the need for baseline measures be taken into account when targets are adopted that require change to be measured from a specific point in time.**

F. Continuity and change

44. For all statistics, there needs to be a regular process of review and development. As the economic and social environment change, so the statistics that are used to monitor development need to change if they are to capture the new situation and remain relevant. That is as true for statistical indicators that monitor conference goals as it is for all other statistics. If that process of review and renewal does not occur, statistical indicators will become less and less relevant. For global statistics, there is another reason for continuous development. The need to establish an indicator quickly may reasonably mean that technical standards are chosen to reflect the reality of what can be achieved in the short term. However, as statistical capacity develops the technical standards that one may apply to any indicator may be increased: definitions may be refined and the quality of the indicator at a global level improved. That process creates a tension between continuity over time and necessary change to improve quality and relevance, a balance that needs to be recognized and will often call for continuity, but there are established methods, such as statistical revisions, to address the need for consistency of time series.

45. **We recommend that:**

- **All statistical indicators be subject to periodic review and improvement;**
- **When such a review results in change, an approach be provided to support countries in moving to the improved indicator while maintaining continuity with the recent past.**

III. Technical assessment and framework for indicators

46. As a result of the United Nations conferences of the 1990s, a list of about 280 separate indicators was identified, on which the overwhelming majority of indicators were statistical in nature. That list was based on indicators derived from 15 global conferences reviewed in a 1999 report of the Secretary-General (E/1999/11). In consultation with the secretariat of the Economic and Social Council, the list was augmented to take account of the World Conference on Education for All (Dakar 2000) and a number of special sessions of the General Assembly held in follow-up to conferences (e.g., the fourth World Conference on Women, held in Beijing in 1995) up until March 2001. The list included indicators that were identified by cross-conference initiatives, such as the Minimum National Social Data Set, the United Nations Development Assistance Framework-common country assessment, basic social services for all and the international development goals (IDG). No other conferences were considered, but the 48 indicators linked to the millennium development goals (see A/56/326, annex) were included.

47. Those indicators cover a wide range of topics but do not include all the statistical indicators that have been identified as desirable by the United Nations and other international organizations: they only include indicators identified by United Nations summits and major conferences. Future meetings will surely identify new areas that require policy monitoring (see sect. IV below). Section III is essentially concerned with the 280 indicators identified.

A. Expert groups and their task

48. As noted above, the indicators were subdivided into seven domains and expert groups established for each domain (demography, health and nutrition, environment and energy, economics and poverty, employment and labour, education and other social).

49. The expert groups, with the support of staff of the United Nations Statistics Division, carried out a technical assessment of each indicator, which is available on the Division web site (http://esa.un.org/unsd/indicatorfoc/) and will be maintained in future. That source contains detailed definitions and specifications for each indicator. **We recommend that the Division web site be the definitive source of technical information on the indicators.**

50. The present report contains a summary of the findings of the expert groups. A background document entitled, "Technical assessment of statistical

indicators" has also been prepared to provide a more comprehensive picture of the work of the expert groups.

51. The expert groups identified sub-domains within each domain as being relatively self-contained separate policy areas. Indicators were allocated to one of three priority tiers:

- Tier 1: a small number of indicators were allocated to the first tier, containing indicators essential for broad monitoring and which all countries are encouraged to compile;
- Tier 2: the second tier contains indicators that add to the information contained in the first tier and which help to convey a fuller picture. Those indicators are likely to be vital for both national policy monitoring and internationally comparative purposes;
- Tier 3: the third tier of indicators is needed to gain a more comprehensive picture of the situation in any domain (depending on national circumstances).

Most of the remaining indicators were allocated to a fourth tier of additional indicators. Many of those would be valuable for portraying additional aspects of the domain and illuminating policy areas further. Some indicators were excluded if there were overriding technical deficiencies or if an alternative was preferred.

B. Criteria for selecting indicators

52. The process of selecting indicators must be grounded in policy needs but also involves balancing a number of criteria surrounding the relevance to policy, the technical properties and current availability (or the feasibility, resource and statistical capacity implications of achieving an acceptable measure in a high proportion of countries). Although one may aspire to the situation in which an indicator fully satisfies all of the criteria, in practice that will not be the case. One must consider the extent to which the indicator meets criteria and make a judgement about whether failure against any one criterion is of such overriding concern as to disqualify a particular indicator from use. A large number of criteria may be identified, but the most important, in our view, are set out below.

Policy relevance

53. In terms of policy relevance:

- Indicators must be relevant to the policy requirement;
- Indicators should measure the real policy objective (or provide a proxy measure that is adequate for policy monitoring);
- Indicators should normally have a global policy relevance;
- Indicators should be straightforward to interpret: changes over time in any direction should not be ambiguous in relation to the policy interpretation, and significant differences between countries should be meaningful in terms of the policy goal.

Technical properties

54. In terms of technical properties:

- Technical properties of the indicator should be adequate for the purpose, recognizing that change over time is often more important than the level of the indicator;
- Indicators that fail to cover the target population fully should have sufficient coverage to ensure that the indicator values are unlikely to mislead policy users (i.e., the potential bias as a measure of the true policy objective should be small);
- If possible, where indicators are difficult to measure for countries with less well developed statistical capacity, simplified alternatives should be provided for use until the statistical capacity can support the more demanding measure;
- Indicators should be robust to institutional and cultural differences between countries and over time;
- Indicators should exhibit change over time at a rate that would support policy monitoring;
- Indicators should be produced with sufficient frequency and timeliness to support policy monitoring;
- Indicators should conform to international standards, if they exist.

Parsimony, availability and cost

55. In terms of parsimony, availability and cost, when considering additional indicators and policy objectives:

- Indicators already established within the priority framework (in particular those contained in existing major sets) should be used, wherever possible;
- Indicators added to the framework should not be closely correlated with other indicators already included and should reflect a new aspect of the policy issue;
- Where indicators are broken down into component indicators (e.g., mortality by cause or school enrolment by age), in order to merit separate inclusion in the framework component indicators should:
  - Support separate policy objectives;
  - And/or demonstrate important differences in time trends;
  - And/or demonstrate important differences between comparable countries;
- The choice of indicator must reflect the availability of data to support the indicator and the statistical capacities of a wide range of countries;
- Indicators that call for new data sources should not create burdens (cost, opportunity cost, skill requirements etc.) that are disproportionate to the benefit for most countries.

C. Criteria for setting priority levels

56. In our view, the priority level for a particular indicator must be driven by policy needs. It must also take account of the technical soundness and data availability for the indicator and the relationship to other indicators within the framework (where relevant). It is natural for anyone associated with a particular topic to regard it as having overriding priority. The priority assessment needs to be strong enough and independent enough to weigh fairly any particular indicator and its policy objective, and to resist "priority inflation" over time. That process should involve policy officials and statisticians, and should take account of national and international priorities. We have made an attempt to achieve that in the proposed framework as a set of initial proposals, but we also recommend a process whereby that can be kept under review. We suggest the following criteria:

- Tier 1 priority indicators should be the primary support for monitoring policies of the highest global and national importance. They represent the indicators that, no matter how limited the statistical capacity available, countries and international agencies would find essential for top-level monitoring of policy effectiveness. Although the number of indicators in that category should be driven by policy importance, we suggest that, as a guideline, any major domain (e.g., economics or health) should aim for no more than four to eight tier 1 priority indicators. Most domains should have fewer;
- Tier 2 priority indicators should cover different policy objectives (different sub-domains) from those covered by the highest priority indicators. Those policy objectives should be of sufficient importance to merit a tier 2 priority indicator. Not all sub-domains would necessarily do so. As a guideline, we suggest that a major policy domain (e.g., economics or health) should aim for no more than eight to 10 tier 2 priority indicators. Most domains should have fewer;
- Tier 3 priority indicators should support policy needs that are, although important, either subsidiary or judged to be less important than others. As a guideline, we suggest that each major policy domain should aim for no more than 10 to 12 tier 3 indicators. Most domains should have fewer;
- The representation of indicators that relate to important cross-cutting issues, such as poverty, gender or child welfare, also needs to be taken into account;
- Indicators that support several policy goals should generally command a priority level that reflects that complexity.

57. In our application of the above-mentioned criteria to create the proposed framework, in some we found that although the policy objective suggested allocation to a particular tier the inherent statistical weaknesses of the proposed indicator and/or measurement problems caused us to allocate the indicator to a lower tier.

Further details are provided in the technical assessment for each indicator on the above-mentioned web site.

58. The suggested numbers for each tier reflect the fact that the indicators are not intended to substitute for the mass of detailed statistical outputs from national statistical systems that support users' needs. They are intended as high-level indicators for monitoring purposes. The suggested numbers reflect the existing levels of statistical capacity within a wide range of countries that are less well developed. As the general level of statistical capacity rises, the potential to define a wider set of indicators can be reviewed.

59. In addition to the criteria set out above, the expert groups were required to take specific account of the indicators contained in the main existing sets of high-level indicators, unless there was an overriding technical reason for recommending an alternative.

60. The question of availability was particularly problematic for the expert groups since it was impossible to carry out a detailed assessment of the availability of 280 indicators in all countries of the world in the time available. **We recommend that the United Nations Statistics Division submit a report to the Commission on the availability of indicators in tiers 1 and 2 (and tier 3, where information is available) of the proposed framework. The report should include an assessment of what might be needed to overcome the shortfall.**

D. Indicators considered

61. In general, we have considered the 280 indicators identified from the United Nations summits and major conferences. However, we have in addition considered a small number of contextual indicators (such as population numbers in specified age groups by sex) that are essential to provide denominators for the other indicators, as well as a very small number of other indicators that are integral to the production of those required.

62. There are other indicators, which have been identified by international agencies or are in use inside many countries for policy-monitoring purposes, that do not appear in the proposed framework.

63. Within the main framework, indicators (or very close equivalents) that are contained in the major indicator sets (MNSDS, UNDAF-common country assessment, international development goals, basic social services for all, millennium development goals and Commission on Sustainable Development) are referenced to the sets to which they belong. There is an element of judgement in that cross-referencing. In some cases, there are technical differences between the indicator as described in the framework and corresponding indicators in the high-level set.

64. In addition to the seven domains, we have set aside a small number of indicators of human rights and good governance. Similarly, two environmental indicators were not included since they were not statistical and were therefore outside our mandate.

65. The development of statistical indicators for human rights and good governance will not be easy and will take time. **We recommend that the Commission establish a mechanism (perhaps a city group involving statisticians and others, including policy officials) to develop statistical indicators of human rights and good governance.** Whatever is established needs to take account of existing initiatives in the field, in particular of follow-up activities to the International Association for Official Statistics conference held in Montreux, Switzerland, from 4 to 8 September 2000. Although we recognize the importance of this area, we take the view that it would be better to "get it right" rather than "get it quick", if widespread ownership of the indicators is to be established around the world.

E. General and domain-related issues

Comparative measures

66. International comparisons require that statistics be put on a basis that is immediately comparable, and for that reason almost all of the indicators are presented as rates or proportions or in per capita terms, which require a denominator (often a population figure of some kind). Economic and some other measures use GDP as a denominator in the same way, which raises the following important issues:

- The pervasive use of GDP and of population estimates in this way underlines the importance of the quality of these estimates and the statistical infrastructure to support them if a wide range of indicators are to be sufficiently reliable;

- Both GDP and population estimates require a strong statistical capacity and infrastructure if they are to be regularly produced;
- Although the immediate population indicators call for population counts by sex and broad age group (0-4, 5-14, 15-64, 65+), the reality is that more precise estimates are required to support a range of other indicators. For example, five-year age categories strengthen age-specific mortality or fertility rates (and hence such measures as the total fertility rate). Also, other age groups are needed to support rates for such indicators as educational participation or HIV/AIDS infection rates;
- An added difficulty is that the numerator of such indicators and the population denominator are often provided from different sources within a country and may be inconsistent. Hence the rates, when calculated, may not be recognized within the lead policy ministry. In extreme cases, different population denominators may be used for different policy areas, which is clearly unsatisfactory and when it occurs may imply a systemic problem of consistency and quality assurance. International agencies have an important quality assurance role in identifying such situations and may act as a catalyst in helping countries to resolve them.

67. **We recommend that:**

- **When considering statistical capacity, international donors and countries themselves take particular account of the importance of a core set of demographic statistics and GDP estimates as an integral component of many statistical indicators;**
- **The need for coherent statistics used in the numerator and denominator of indicators be recognized, and that international agencies work to identify inconsistencies and act as a catalyst in helping countries to resolve them.**

68. A large number of indicators are usually derived from administrative systems in countries where they are well established (e.g., mortality rates by cause, fertility rates, net enrolment rates in education and many health indicators concerned with health services and provision). In countries where those systems are unavailable, survey-based measures are available and widely used in which both the numerator and denominator of the indicator may be derived from survey estimates, in which case a special survey devoted to one particular area of interest (e.g., health and fertility history) could provide a wide range of indicator values. Such surveys could easily extend beyond those contained in the three priority levels of the framework and that is a viable possibility, particularly when countries want a more comprehensive picture of a situation.

69. However, ad hoc surveys cannot provide the ongoing information needed to track important indicators. To ensure that critical information will be available on an ongoing basis, it is necessary to invest resources in the statistical infrastructure, which should include administrative databases and survey capabilities.

70. In addition, priority indicators should be few enough that all countries have the potential to produce them.

Meta-data

71. This is essential if users are to understand any particular issues affecting the statistical indicator values for any country. Good meta-data, such as those required by the Special Data Dissemination Standard and General Data Dissemination System of IMF, is a general requirement, but there are specific situations when countries should ensure that specific meta-data is provided. In particular:

- When national priorities result in an indicator, that is not fully comparable with those produced by other countries, failure to provide informative meta-data will fail those users who seek to use the indicator for comparative purposes;
- Where national standards or targets are adopted (for example, in setting a national poverty standard), the basis of that measure should be available to users;
- Population forecasts will depend crucially on the assumptions made about age-specific fertility rates, for example. A clear specification of the underpinning assumptions is essential to users;
- The assumptions underpinning inter-censal population estimates should be made known in countries where vital registration systems are unreliable or unusable.

72. **We recommend that member States supply adequate meta-data to support users' needs, in particular where national norms differ from international measures or underpinning assumptions may materially affect the indicator value.**

Gender statistics

73. A number of indicators call for separate analyses by sex. **As a general rule, we recommend that if the data source can support an analysis by sex then such analysis should be provided for all indicators.** To add emphasis, we have identified in the framework the indicators for which separate estimates by sex are particularly needed.

Distributional measures

74. There is a general issue about providing indicators that measure inequality and distribution within each country. There are a rather small number of indicators that focus on distributional issues (e.g., share of consumption by lowest quintile of population), but the large majority of indicators are based on national averages. Although it is beyond our mandate, we feel bound to observe that such indicators will mask much deprivation and inequality in the world. Analysis by subgroups (e.g., by sex, region, age group, income groups, ethnic or social classifications), where feasible, would illuminate that issue much more. Similarly, additional measures of inequality, such as the ratio of consumption by the highest 20 per cent of households to the lowest 20 per cent, have much to commend them.

Frequency

75. As a general issue, we comment on the frequency of provision of indicator values. In many countries with well-developed statistical systems, annual estimates will be available, and we regard that as the desirable goal. However, not all countries can sustain that frequency. The frequency with which indicators should be measured will vary according to the importance of the topic and the rate of change that the indicator is likely to display. **We recommend that, in general, indicators should be measured every three to five years, but some should be measured annually, while others (particularly those that are census based) should be updated every 10 years.** Failure to produce indicators at the desired frequency may be one sign of inadequate statistical capacity.

Demography domain

76. The choice of indicators in tiers 1 and 2 was relatively simple for the expert group because many are common to the needs of the United Nations conferences. They are well established nationally and internationally, are relatively widely available and are relatively few. They depend upon a good infrastructure for population statistics and vital registration. The indicators provide important contextual information for the indicators in other domains.

Health and nutrition domain

77. This domain has certain characteristics that make prioritizing very challenging. It includes an exceptionally large number of indicators. However, the indicators do not span all major health sub-domains, resulting in significant gaps in the final indicator set. That final set cannot be viewed as a core indicator set for the health domain. The fact that the indicators are at very different levels of specificity also makes it difficult to identify a coherent high-priority set. In addition, many of the indicators in the demography domain may also be considered major health indicators that should be evaluated along with the health and nutrition indicators. The sheer number of indicators made it difficult to carry out a full technical assessment, and that activity will need to continue in the future.

78. The technical evaluation of some of the indicators raised problems of data availability. Although such evaluation is done on an indicator-by-indicator basis, strategies for supplying the needed data can be developed in a more coordinated way. Investing in components of the statistical infrastructure, such as the vital statistics system or national health surveys, would provide data for several of the high-priority indicators, which would also allow countries to collect more extensive statistical information on particular aspects of health covered by the full set of conference indicators, if needed.

79. Given the large number of indicators, we felt it necessary to provide clear guidance on a relatively small number of indicators that countries could measure. We have made an initial attempt to carry out the technical assessment and to provide some structure,

and as a result a large number of indicators have been allocated to the additional category. Although many of those indicators present significant measurement challenges, countries that have the statistical capacity and the need for the more detailed information may wish to produce some of those indicators. **We recommend that the Commission establish a process involving official statisticians and others, including officials of the World Health Organization, to review the hierarchical framework and priorities in the health domain with the intention of addressing the substantive gaps in the indicator set, determining if there are infrastructure investments that can address a range of data gaps and creating linkages between the short list of priority indicators and the large number of other indicators in the domain.**

Environment and energy domain

80. Environmental indicators span a very wide range of different issues, and it is not likely that one indicator will serve as a proxy for others, which results in rather more indicators for the domain than one might initially expect. Also, environmental factors vary enormously with climate, and there will be issues, such as desertification or forest loss, that are not highly relevant to all countries. Nevertheless, those indicators are concerned with global issues as well as national policy areas. Comparability of indicators across countries is particularly difficult for some environmental indicators. It is often not the absolute level of the indicator so much as the trend over time that is the key focus of policy.

Economics and poverty domain

81. Except for GDP, which is provided as a contextual indicator, it is recommended that monetary indicators be expressed, not as a level but in general as a percentage of current price GDP. In the main, GDP is recommended rather than gross national income (GNI) for that purpose. **We recommend that the indicators adopted in the major sets be amended to be consistent with the use of GDP/GNI in the framework.**

82. A number of indicators depend on a poverty measure that may be a global standard (e.g., $1 per day or $2 per day) or may be a nationally determined poverty threshold. Also, measures may be based upon income or expenditure. The group favours an expenditure measure and for international comparison proposes an international standard. In all cases, the indicator should employ the purchasing power parity (PPP) conversion. Countries may also wish to utilize nationally determined poverty thresholds, if appropriate. A well designed household budget and consumption survey can be used for both universal and national measures. **Where these are produced, we recommend that the meta-data make the basis of poverty indicators clear, and in the case of national poverty lines it should contain an explanation of the methodology employed.**

83. When the indicator is measured in a financial unit (e.g., GDP or GDP per capita) the group favours the use of PPP conversion for international comparisons but recognizes that for some countries that may not be available and exchange rate conversion may be the only option. PPP estimation is virtually unique in the sense that its primary purpose is to convert monetary aggregates to a common unit for international comparison purposes. As such and with related measurement capability especially for developing countries, it may fall relatively low on national priorities. Those measures need continued effort if quality is to be improved, a fact that has been recognized by the Commission as well as international agencies and the World Bank. Given the nature of the measure, international assistance is essential. **We recommend that all efforts be made to fulfil the decisions of the Commission made in 2001 in respect of purchasing power parity measurement.**

Employment and labour domain

84. The majority of indicators in this domain derive from the ILO key indicators of the labour market project. Establishing priorities for the indicators is complicated by two factors. First, labour market indicators support both economic and social policies (e.g., earnings are a primary determinant of family well-being and the principal cost of production). Hence, a wide range of policy issues is at stake. The second factor is the fundamental difference between labour markets in most industrialized and developing countries. For example, indicators relating to the informal sector are essential to policy developments in most developing countries but are of little relevance to the analysis of labour markets in industrialized

countries. The choice of tier 1 indicators reflects an attempt to optimize at the global level.

Education domain

85. Indicators in the employment and labour domain are based upon a sound theoretical and conceptual base and half a century of continual measurement and refinement. In comparison, the proposed indicators in the education domain lack a similar solid conceptual foundation and measurement history. The first task of the group was to classify the indicators using the International Indicators of Education Systems framework of OECD as a rough guide. Once classified, it became clear that the majority of the proposed indicators reflect educational inputs rather than educational process or output/outcome measures. Also, outcome indicators used grade-level attainment as a proxy for real levels of literacy achievement. The main challenges for the group were, therefore, to try to strike a more balanced reflection of educational inputs, processes and output/outcomes and to recommend more reliable methods for indicators in the literacy domain. **We recommend that the Commission establish a process involving educational statistics experts from international agencies and member States to investigate the feasibility of adapting skill assessment methods employed in the developed world for use in developing nations.**

Other social domain

86. This domain is necessarily diverse since it comprises the social policy issues not allocated to other domains. Many of the topics do not have a strong framework of international statistical standards and guidelines as other areas. Hence, a number of the proposed indicators need further conceptual and statistical development if they are to be well grounded. We have drawn attention to them in the web site and have suggested some additional indicators that may be considered further through the process described in section IV below. The range of indicators derived from United Nations summits and major conferences in the "other social" domain appears to be deficient. In particular, the indicators for female participation and gender equality focus on political participation. There are no corresponding indicators for female participation in professional and senior administrative levels of the labour force. Also, there are virtually no social indicators focused on the social and housing conditions in which children are raised.

F. Indicator recommendations

87. Table 1 contains the recommendations of the expert groups for a classification of the indicators into the three priority tiers. The framework includes the structure of domains and sub-domains so that one may see how any indicator fits into the wider framework. Table 1 also contains a key to the indicators that appear in the major indicator sets. Detailed information on all the indicators considered is available on the United Nations Statistics Division web site (http://esa.un.org/unsd/indicatorfoc/). In addition, a background document entitled "Technical assessment of statistical indicators" contains a description of the work of the expert groups and comments on the indicator framework, issues and perceived deficiencies.

88. Table 1 has been structured to reflect the major policy areas that are common in most national Governments (economics, health, education etc.). Inevitably, there are important cross-cutting policy areas that are contained within the hierarchy. For example, gender statistics or statistics relating to children are contained within a wide number of domains and sub-domains. Similarly, the economic aspects of poverty are contained within the economics and poverty domain, but indicators that reflect other aspects of poverty are contained in other domains.

89. Table 2 provides a breakdown between the domains, by priority tier. For convenience, some demography sub-domains (mortality and fertility) include appropriate health indicators. The three priority tiers contain 38, 42 and 43 indicators, respectively.

90. Table 3 provides an analysis of the relationship between the priority recommendations contained in table 1 and the lists of indicators comprising the high-level sets (MNSDS: 15 indicators, millennium development goals: 48 indicators, international development goals: 29 indicators, UNDAF-common country assessment: 57 indicators, basic social services for all: 12 indicators; Commission on Sustainable Development: 58 indicators). Those counts include cases in which the expert group recommended a technical change in an indicator already identified by United Nations conferences or a direct replacement was judged to be preferred (for example, the

substitution of GDP for GNI for economics indicators; see para. 81 above).

91. A number of non-statistical indicators (human rights and environment) have been excluded from our considerations and hence from table 1. Also, a number of the indicators associated with the millennium development goals will be monitored for specific sets of countries only; they have been excluded on the basis that they are not global indicators. Table 1 shows that a high proportion of the various major sets are included in the three priority tiers of the framework. The remainder are generally included in the category of additional indicators, unless the proposed indicator was sufficiently flawed technically as to be omitted altogether.

92. MNSDS was established by the Commission as an attempt to provide guidance to countries on a high priority set of indicators that reflected United Nations summit and major conference priorities at that time. **We believe that that function has been superseded by the proposed priority framework, and hence we recommend that the Minimum National Social Data Set be withdrawn.**

IV. Future processes

93. The third requirement of the present report is to develop and recommend to the Economic and Social Council a mechanism of statistical review for future proposed indicators.

94. Future processes are undoubtedly needed for several important reasons. First, future United Nations summits and conferences will inevitably address new policy areas, or, when reviewing progress on existing policy areas, will see the need to modify or elaborate the policy objectives in such a way that new or revised indicators are needed. The second important reason is that international agencies must review and develop the indicator frameworks that relate to their sphere of interest as policy objectives change or new issues appear on the agenda. Indeed, we are aware of such reviews currently taking place in several agencies, and the indicator framework should be updated as those reviews come to fruition. The third reason is that international standards, definitions and best practices must evolve over time as technical standards increase (and as the global statistical capacity develops and can support more demanding standards). **For all those reasons, we recommend that it is vital that the framework be kept up to date.**

95. We see the need to consider three related issues:

- Establishing new indicators in response to future major conferences and summits;
- Keeping under review the proposed hierarchical framework and priorities;
- Reviewing and refining existing indicators over time.

A. New summits and major conferences, and new indicator initiatives

96. The work to establish new indicators should begin as part of the preparation for any forthcoming major conference or summit, and should involve both policy officials and statisticians from both international organizations and member States. In our view, there is not necessarily a need for new mechanisms but there is a need to make existing mechanisms work more effectively. A number of principles need to be applied:

- Although policy officials for a particular conference will see themselves as being in the lead on indicators related to a particular topic, many other officials from other parts of the United Nations and other international agencies have a legitimate interest in the development of indicators in any field;
- The indicator requirement should be seen within the wider context of the totality of indicator needs. As such, emerging needs must be set alongside existing needs;
- The development of new indicators should be reconciled with national policy needs for statistics and should take account of the statistical capacity of countries to produce them;
- Statisticians from international organizations have a role to play in assessing quality and reconciling the definitions of proposed indicators with the range of policy uses that may exist. National statisticians should also be involved in that process. But in addition, since they are closer to the raw data, they have a special perspective on the technical properties of indicators, the availability of any proposed indicator and the data-collection and resource implications;

- International consultation takes time, as does the development of high-quality statistical outputs, which needs to be recognized by the United Nations and other international agencies. However, if the wish of the Council to build agreement and ownership across the international community and Member States is to be realized, then that time is time well spent.

97. The ideal arrangements are not easy to articulate. In general, most (but not all) parts of the international community have made considerable efforts to improve coordination between themselves, but the problem of drawing member States into the indicator development process in a full and genuine way is much more difficult. Token consultation by international agencies when key decisions have already been made is not sufficient. At the national level, there is often good communication between statisticians and policy officials since national statistical plans need to be grounded in policy needs. In many countries, statistical work for some domains is often located in the lead ministry concerned rather than in a central statistical office, which improves communication between the statistician and the policy officials but often disrupts it between those statisticians and others in the national statistical system. Lack of coordination and coherent planning across the national statistical system is a sign of inadequate statistical capacity and/or legal and administrative frameworks for national statistics in a country.

98. From the national statistical perspective, it is the statisticians who are directly responsible that should make inputs into the indicator development process. But it is also essential that national statistical offices be informed if the coordination between statistical activities is to be achieved. We have tried to address that point in our recommendations.

99. **We recommend that advanced planning for United Nations summits or major conferences, or the significant review of indicators within any international agency, should trigger the consultation process described below.**

100. **We recommend that the identification of statistical indicators for monitoring purposes should involve both policy officials and statisticians, that each of those groups should draw upon international agencies and Member States, and that:**

- **The identification and development of new indicators should be coordinated by the appropriate lead policy area;**
- **It should take account of the capacity of countries to produce them;**
- **The officials concerned should have a clear responsibility to involve other agencies and parts of the United Nations organization who have a legitimate interest at the earliest stage;**
- **The liaison should involve both policy officials and statisticians within the international agencies; in particular, the United Nations Statistics Division should be involved from the outset;**
- **A number of representatives (statisticians and policy officials) of member States should be invited to join any development team as full participating members, and wider (electronic) consultation should also be undertaken;**
- **Within member States, the statisticians consulted should be those responsible for the relevant area, but the Division should ensure that national statistical agencies are involved in coordination issues;**
- **The Division should use the regional statistical commissions and direct electronic communication with national statistics offices to ensure that national statisticians are consulted during the development process;**
- **National statisticians, in turn, should use their regular contacts with their user communities (particularly national policy officials) to provide feedback on the reconciliation of national and international requirements, and the Division should provide feedback to the development process through those mechanisms;**
- **In due course, the lead policy area, in consultation with the Division, should make proposals to the Commission, which would report to the Economic and Social Council.**

101. **We recommend that the responsibility for maintaining the indicator framework and for extending it to take account of new requirements should rest with the Commission, which would recommend to the Council the adoption of new**

indicators and their position within the hierarchical framework.

102. **We recommend that the Commission establish a standing committee to take responsibility for indicator issues and to act on behalf of the Commission between meetings so that no undue delay occurs.**

103. **We recommend that the Division, in close consultation with the lead policy officials and as a result of the consultation process recommended, prepare recommendations for the Commission (or its standing committee, as appropriate).**

104. **We recommend that in developing indicators and placing them within the framework, the criteria listed in paragraphs 52-55 above be applied.**

B. Technical improvements and new international standards

105. The process of making technical improvements to statistics and of updating international statistical standards is long established. **Hence, we recommend that periodic reviews of individual statistical indicators within the proposed framework be included within the appropriate work programmes of statistical review and revision that are regularly reported to the Commission.**

V. Conclusion

106. **In our view, the future development of the indicator framework should be based on the present report and we recommend that the Friends of the Chair group be discharged.**

VI. Consolidated recommendations

107. **The 31 recommendations of the Friends of the Chair are set out below in a consolidated list.**

Consolidated recommendations of the Friends of the Chair

Development of indicators and maintenance of the indicator framework

1. The indicator framework should be updated in response to future United Nations summits and major international conferences, developments of the indicator framework within international agencies and advances in technical standards. (para. 94)

2. Advanced planning for United Nations summits or major conferences, or the significant review of indicators within any international agency, should trigger the consultation process recommended. (para. 99)

3. The need for baseline measures should be taken into account when targets are adopted that require change to be measured from a specific point in time. (para. 43)

4. The identification of statistical indicators for monitoring purposes should involve both policy officials and statisticians, each of those groups should draw upon international agencies and member States, and:

- The identification and development of new indicators should be coordinated by the appropriate lead policy area;
- It should take account of the capacity of countries to produce them;
- The officials concerned should have a clear responsibility to involve other agencies and parts of the United Nations Organization that have a legitimate interest at the earliest stage;
- The liaison should involve both policy officials and statisticians within the international agencies; in particular, the United Nations Statistics Division should be involved from the outset;
- A number of representatives (statisticians and policy officials) of member States should be invited to join any development team as full participating members and, wider (electronic) consultation should also be undertaken;

- Within member States, the statisticians consulted should be those responsible for the relevant area, but the Division should ensure that national statistical agencies are involved in coordination areas;
- The Division should use the regional statistical commissions and direct electronic communication with national statistics offices to ensure that national statisticians are consulted during the development process;
- National statisticians, in turn, should use their regular contacts with their user communities (particularly national policy officials) to provide feedback on the reconciliation of national and international requirements, and the Division should provide feedback to the development process through those mechanisms;
- In due course, the lead policy area, in consultation with the Division, should make proposals to the Commission, which would report to the Economic and Social Council. (para. 100)

5. The responsibility for maintaining the indicator framework and for extending it to take account of new requirements should rest with the Commission, which would recommend to the Council the adoption of new indicators and their position within the hierarchical framework. (para. 101)

6. The Statistical Commission should establish a standing committee to take responsibility for indicator issues and to act on behalf of the Commission between meetings to ensure that no undue delay occurs. (para. 102)

7. The Division, in close consultation with the lead policy officials and as a result of the consultation process recommended, should prepare recommendations for the Commission (or its standing committee, as appropriate). (para. 103)

8. In developing indicators and placing them within the framework, the criteria listed in paragraphs 52-55 should be applied. (para. 104)

9. The Statistical Commission should establish a process involving official statisticians and others, including officials of the World Health Organization, to review the hierarchical framework and priorities in the health domain with the intention of addressing the substantive gaps in the indicator set, determining if there are infrastructure investments that can address a range of data gaps and creating linkages between the short list of priority indicators and the large number of other indicators in the domain. (para. 79)

10. The Commission should establish a process involving educational statistics experts from international agencies and member States to investigate the feasibility of adapting skill assessment methods employed in the developed world for use in developing nations. (para. 85)

11. The Commission should establish a mechanism (perhaps a city group involving statisticians and others, including policy officials) to develop statistical indicators of human rights and good governance. (para. 65)

12. The indicators adopted in the major sets should be amended to be consistent with the use of GDP/GNI in the framework. (para. 81)

13. The Minimum National Social Data Set should be withdrawn. (para. 92)

Production of indicators

14. The Division should submit a report to the Commission on the availability of indicators in tiers 1 and 2 (and tier 3, where information is available) of the proposed framework. The report should include an assessment of what might be needed to overcome the shortfall. (para. 60)

15. In general, indicators should be measured every three to five years, but some should be measured annually, while others (particularly those that are census based) should be updated every 10 years. (para. 75)

16. If the data source supports an analysis by sex then such analysis should be provided for all indicators. (para. 73)

17. The need for coherent statistics used in the numerator and denominator of indicators should be recognized, and international agencies should work to identify inconsistencies and act as a catalyst in helping countries to resolve them. (para. 67)

18. Member States should supply adequate meta-data to support users' needs, in particular where national norms differ from international measures or underpinning assumptions may materially affect the indicator value. (para. 71)

19. Meta-data should make the basis of poverty indicators clear, and for national poverty lines it should contain an explanation of the methodology employed. (para. 82)

20. International agencies should strive to improve the coordination of data collection from countries. (para. 39)

Technical and quality issues

21. The United Nations Statistics Division web site should be the definitive source of technical information on the indicators. (para. 49)

22. The Division should promote the development of standards and guidance on best practices for indicators, where needed. (para. 39)

23. All statistical indicators should be subject to periodic review and improvement, and when such a review results in change, an approach should be provided to support countries in moving to the improved indicator while maintaining continuity with the recent past. (para. 45)

24. Periodic reviews of individual statistical indicators within the proposed framework should be included within the appropriate work programmes of statistical review and revision that are regularly reported to the Commission. (para. 105)

Statistical capacity

25. The Economic and Social Council and international donors should recognize the need to support and develop core statistical capacity within member States, including statistical infrastructure, and all donor activity for statistics should recognize the need to address both national and international statistical requirements. (para. 39)

26. As part of that recognition, the Council and international organizations and donors should promote the use of statistics to support effective national policy development and good public administration. (para. 39)

27. Donor-supported programmes should genuinely add to the statistical capacity within the country rather than divert it. (para. 39)

28. When considering statistical capacity, international donors and countries themselves should take particular account of the importance of a core set of demographic statistics and GDP estimates as an integral component of many statistical indicators. (para. 67)

29. The initiative to develop an indicator of national statistical capacity through the PARIS 21 initiative should span social and economic statistics and should be modified to involve member States, and final proposals should be made to the Commission. (paras. 29 and 39)

30. All efforts should be made to fulfil the decisions of the Commission made in 2001 in respect of purchasing power parity measurement. (para. 83)

Miscellaneous

31. The Friends of the Chair group should be discharged. (para. 106)

Table 1
Hierarchy of statistical indicators, by domain and sub-domain

Domain/sub-domain	*Tier 1*	*Tier 2*	*Tier 3*
Demography			
Population structure and growth	Average annual population change [6]		Population projections by age (0-4, 5-14, 15-64, 65+) and sex, in five-year intervals for 25-year horizon (initially 2010 to 2025) [1]
	Population by 5-year age groups and sex (if not possible by 5-year age groups then 0-4, 5-14, 15-64, 65+) [3, 4]		Per cent living in urban areas [6]
Demography/Health			
Fertility/Reproductive health	Total fertility rate [2, 4]	Fertility rate, females aged 15-19	
	Contraceptive prevalence rate [1, 2, 3, 4, 5, 6]		
Mortality	Life expectancy at birth by sex [1, 2, 3, 4, 6]	Infant mortality rate by sex [1, 2, 3, 4, 5]	Under-5 mortality rate from diarrhoea
	Under-5 mortality rate by sex [1, 2, 3, 4, 5, 6]	Malaria mortality rate [5]	Under-5 mortality rate from acute respiratory infections
		Maternal mortality ratio [1, 2, 3, 4, 5]	
Health and nutrition			
Health status and health behaviours	HIV/AIDS prevalence rate, ages 15-24, by sex [2, 4, 5]		Low birth weight (under 2,500 g) rate (birth weight below 2.5 kg)
			Malaria morbidity rate [5]
			Malaria treatment [5]
			Total child disability rate
Access to health care	Proportion of births attended by skilled trained health personnel [2, 4, 5]		Access to basic health care [3, 4, 6]

Domain/sub-domain	*Tier 1*	*Tier 2*	*Tier 3*
Nutritional status/ Healthy weight	Proportion of children under 5 suffering from malnutrition (underweight), (severe and moderate malnutrition), (incorporates nutritional status of children) [2, 3, 4, 5, 6]	Proportion of population undernourished (below minimum level of dietary consumption) [4, 5]	Prevalence of stunting
Prevention/Immunization/ Public health measures	Proportion of children under 1 immunized against measles [4, 5, 6[a]]		Proportion of population immunized against TB (TB immunization coverage)
	Proportion of children under 1 immunized against DPT (DPT immunization coverage) [6[a]]		Polio incidence rate
	Proportion of population with access to safe drinking water [1, 2, 3, 4, 5, 6]		
	Proportion of population with access to sanitary means of excreta disposal [1, 2, 3, 4, 5, 6]		
Environment and energy			
Atmosphere	Emissions of greenhouse gases (millions of tons, expressed in CO_2 equivalents) [2, 4, 5, 6]	Ambient concentration of pollutants in urban areas [6]	
		Consumption of ozone-depleting substances (tons, expressed in CFC-11 equivalents) [5[b], 6]	
Land	Forest area as per cent of land area (and trend over time) [2, 5, 6]	Fertilizers use in agriculture per unit of agricultural land area [6]	Proportion of forest fellings to the net annual forest increment [6]
		Use of pesticides per unit of agricultural land area [6]	Total arable and under permanent crop land area [4, 6]
		Proportion of land affected by desertification [6]	
Oceans, seas and coasts		Algae concentration in coastal waters [6]	Proportion of annual catch of major marine species to spawning biomass [6]

Domain/sub-domain	*Tier 1*	*Tier 2*	*Tier 3*
Freshwater	Annual withdrawals of ground and surface water as per cent of total renewable water [6]	Biochemical oxygen demand in water bodies [6]	Concentration of faecal coliforms in freshwater [6]
Biodiversity	Protected area as per cent of total area [2, 4, 5, 6]		Area of selected key ecosystems [6]
			Abundance of selected key species [6]
Consumption and production patterns	Energy use per unit of GDP [2, 4, 5, 6]	Share of consumption of renewable energy sources [6]	Annual energy consumption per capita [6]
	Generation of hazardous and radioactive wastes [6]	Intensity of energy use by manufacturing and commercial/services sector [6]	Consumption volume of primary and secondary materials per unit of real GDP [6]
		Intensity of energy use in the residential sector [6]	
		Intensity of energy use in transportation [6]	
		Waste treatment [6]	
		Total generation of industrial and municipal solid waste per capita per year [6]	
Economics and poverty			
Economic resources	Real GDP per capita [1, 6]		Growth in real GDP per capita [4][c]
	Real GDP (in PPP terms)		
Distribution/Inequality	Gini coefficient of (disposable) income distribution (Gini index of income inequality) [6]		
Poverty	Proportion of population below US$ 1 [2, 4, 5, 6]	Poverty gap ratio (incorporates poverty gap at $1 per day and poverty gap at $2 per day) [2, 4, 5]	

Domain/sub-domain	*Tier 1*	*Tier 2*	*Tier 3*
	Proportion of population below national poverty line [4, 6]	Lowest (income or consumption) quintile's share of total consumption (poorest fifth's share of national consumption) [2, 4, 5]	
Saving and investment		Investment as a proportion of GDP [2, 6]	
		Gross saving as a proportion of GDP [4]	
International trade and foreign investment	Trade as a proportion of GDP [2, 4]	Net external debt as proportion of GDP [2, 4, 6]	
International development assistance		Net official development assistance as a percentage of GNI [2, 5, 6]	
Particular components of expenditure, income and production			Government expenditure on health as proportion of GDP
			Government expenditure on education as proportion of GDP
Inflation			Annual average rate of inflation
Employment and labour			
Labour supply	Labour force participation rate	Employment-to-population ratio [1, 4]	Proportion of labour force aged 25-29 with tertiary education
			Proportion of labour force aged 15 years and over with tertiary education
Labour utilization	ILO comparable unemployment rate, by sex [1, 4, 6]	Long-term unemployment rate	Time-related underemployment as percentage of labour force
		Unemployment rate, by educational attainment	
		Youth unemployment rate [5]	
Distribution of labour	Employment proportions, by sector (Agriculture/industry/services)	Percentage employed, by status (waged and salaried/self-employed)	Urban informal sector employment as percentage of total urban employment

Domain/sub-domain	*Tier 1*	*Tier 2*	*Tier 3*
		Informal sector employment as percentage of total employment [4]	
Labour volume		Mean annual hours worked per person	Proportion of employees working 1-10 hours per week
		Part-time employment as percentage of employment	Proportion of employees working over 40 hours per week
Cost of labour		Hourly compensation cost in PPP$	Labour compensation per unit of output in PPP$
		Real manufacturing wage trends (ILO and UNIDO series)	
Gender equality	Female share of paid employment in non-agricultural activities [4, 5]	Ratio of average female-to-male wages [6]	
Labour output measures		Value added per person employed in PPP$	Value added per hour worked in PPP$
Child labour	Proportion of children aged less than 15 who are working [4]		
Education			
Financial resources	Public current expenditure on primary education (a) as a percentage of GDP, and (b) per pupil, as a percentage of GDP per capita		
Teachers		Pupil teacher ratio	Proportion of primary teachers having required academic qualifications
Participation	Net enrolment ratio in primary (or basic) education, by sex (incorporates ratio of girls to boys in primary education) [2, 4, 5]		Ratio of girls to boys in tertiary education
	Net enrolment ratio in secondary education by sex (incorporates ratio of girls to boys in secondary education) [2,[d] 4, 5[e]]		

Domain/sub-domain	*Tier 1*	*Tier 2*	*Tier 3*
Output and efficiency	Proportion of pupils starting grade 1 reaching grade 5 of primary education [2, 4, 5, 6]	Average number of years of schooling completed by urban/rural, sex and, where possible, by income classes [1]	Secondary school completion ratio
Outcome	Adult literacy, by age and sex [2, 3, 4, 6]		Proportion of population aged 25-64 who completed secondary education [6]
Other social indicators			
Crime and justice		Homicide rate [4,[†] 6[†]]	Crime rates [4, 6]
			Number of persons in prison per 1,000 population
			Prevalence rates of illicit drug use (or) illicit drug-related death rate [4]
Women empowerment and gender equality	Proportion of seats in national Government, including Parliament, held by women [4, 5]		Ratio male/female decision makers at city level
Housing	Proportion of households with electricity (household connections: electricity)	Number of people per room (excluding kitchen and bathroom) [1, 4]	Area of urban settlements, by formal and informal [6]
			Proportion of households with piped water
			Tenure type: percentage of all households that own their dwellings and percentage of all households that rent their dwellings [5]
Access to information technology	Main telephone lines per 1,000 population [5, 6]	Internet subscribers per 1,000 population [6]	
		Number of PCs per 1,000 population [5]	

Key:

[1] = Minimum National Social Data Set
[2] = International development goals
[3] = Basic social services for all
[4] = Common country assessment
[5] = Millennium development goals
[6] = Indicators of sustainable development (Commission on Sustainable Development indicators)

[a] Part of the Commission on Sustainable Development indicator "immunization against infectious childhood diseases", whose definition includes "the proportion of children immunized against diphtheria, tetanus, pertussis, measles, poliomyelitis, tuberculosis and hepatitis B before their first birthday".

[b] Not one of the 48 millennium development goals indicators; however, indicator No. 28 (carbon dioxide emissions — per capita) also includes "two figures of global atmospheric pollution: ozone depletion and the accumulation of global warming gases".

[c] The common country assessment indicator is "decadal growth rate of GNP per capita".

[d] The international development goals indicator is "ratio of girls to boys in primary and secondary education combined".

[e] The millennium development goals indicator is "ratio of girls to boys in primary, secondary and tertiary education".

[f] As part of the indicator "crime rates".

Table 2
Number of indicators, by domain and priority level

Domain	Priority levels		
	Tier 1	*Tier 2*	*Tier 3*
Demography	2	0	2
Demography Health	4	4	2
Health and nutrition	7	1	8
Environment and energy	6	13	8
Economics and poverty	6	6	4
Employment and labour	5	12	8
Education	5	2	4
Other social indicators	3	4	7
Total	**38**	**42**	**43**

Table 3
Correspondence of recommended indicators to existing sets, by priority level

Indicator sets	Priority level			
	Tier 1	*Tier 2*	*Tier 3*	*Total*
MNSDS	7	5	1	13/15
UNDAF-common country assessments[a]	25	11	5	40/50
International development goals	18	7	0	25/29
Basic social services for all	8	2	1	11/13
Commission on Sustainable Development[b]	23	19	13	50/56
Millennium development goals[c]	19	9	3	30/36

[a] Total count for UNDAF-common country assessments excludes seven proposed non-statistical indicators on human rights and good governance; the total of 40 does not equal the sum of the tiers (25 + 11 + 5 = 41) because of overlapping (e.g., "homicide rate" and "crime rates" from table 1 are considered as a single common country assessments indicator, "crime rate", rather than two separate indicators).

[b] Total count for the Commission on Sustainable Development excludes two non-statistical indicators on the environment; the total of 50 does not equal the sum of the tiers (23 + 19 + 13 = 55) because of overlapping (e.g., "per cent under 1 immunized against measles" and "under 1 immunization rate against DPT" from table 1 are considered as a single Commission indicator, "immunization against infectious childhood diseases", rather than two separate indicators.

[c] Total count for millennium development goals excludes 12 indicators that will be monitored for specific groups of countries only; it also excludes "two figures of global atmospheric pollution" (see A/56/326, annex) that need to be specified in the future (see table 1, footnote b). The total of 30 does not equal the sum of the tiers (19 + 9 + 3 = 31) because of overlapping (e.g., "malaria mortality" and "malaria morbidity" from table 1 are considered as a single millennium development goals indicator, "prevalence and death rates associated with malaria", rather than two separate indicators.